

### State Regulators “Can Hardly Wait” for Mercury CEMs

**Proceed with plans to conduct verification testing of continuous emission monitors (CEMs) for mercury.**

That was the consensus of participants representing a variety of perspectives at a meeting for CEM vendors. The meeting was held April 18 at U.S. Environmental Protection Agency (EPA) facilities in Research Triangle Park, NC, and was co-hosted by EPA and Battelle. Battelle is EPA’s partner for the Advanced Monitoring Systems (AMS) pilot in the Environmental Technology Verification Program.

Eight vendors and 20 observers attended the meeting, including regulators from four states. State regulators indicated they were extremely interested in having ETV-verified performance data on mercury CEMs, instruments that can provide real-time emissions data from such facilities as incinerators and coal-fired electrical power plants. (See comments on the next page.)

U.S. EPA is considering regulating mercury emissions from coal-fired power plants nationwide, which might require the use of mercury CEMs in such facilities. Meanwhile, states have the authority to approve these technologies for use within their borders. Members of the AMS pilot’s air stakeholder committee assigned a high priority to testing mercury CEMs.

The purpose of the April meeting was to assess interest in verification testing of mercury CEMs and seek input for a

draft verification test/quality assurance (QA) plan, which is being prepared by Battelle. Comments were invited on the readiness of commercially available mercury CEMs, necessary test procedures, reference methods to be used for comparisons, and possible test schedules.

“Our approach to developing a test/QA plan is to involve vendors as much as possible in the initial session, then to develop a conceptual plan and submit it for comment to vendors, AMS stakeholders who monitor the testing process, EPA representatives, and expert peer reviewers,” said Dr. Thomas Kelly, Battelle’s test leader for the AMS pilot.

A two-phase test is planned. Phase 1 is scheduled to begin in August and last approximately two weeks. It will be conducted at a pilot-scale combustion facility operated by the Air Pollution Prevention and Control Division (APPCD) of EPA’s Office of Research and Development in the National Risk Management Research Laboratory (NRMRL) at RTP. The pilot facility will provide to each instrument combustion flue gas spiked with mercury solutions and other components, in addition to clean calibration gases, based on an elemental mercury standard gas, with added interferants.

Parameters planned to be verified during Phase 1 are relative accuracy, calibration/zero drift, calibration error, precision (i.e., repeatability at stable conditions), interferences, response time, and data completeness.

Phase 2 is expected to be conducted at a full-scale facility yet to be determined. Separate verification statements and reports will be issued for each phase and for each participating company.

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**Tom Kelly of Battelle provided background information to meeting attendees about possible verification testing of mercury CEMs.**



The AMS pilot is one of 12 pilots in the U.S. Environmental Protection Agency’s Environmental Technology Verification Program. ETV was established to accelerate the development and commercialization of improved environmental technologies through third-party verification testing and reporting of the technologies’ performance. The ETV process provides purchasers and permittees with an independent assessment of the technology they are buying or permitting and facilitates multi-state acceptance. For further information, contact Helen Latham at Battelle, 505 King Ave., Columbus, Ohio 43201-2693; Phone 614-424-4062; Fax 614-424-5601; E-mail [lathamh@battelle.org](mailto:lathamh@battelle.org).

## Mercury CEMs (continued from page 1)

Representatives of several groups and agencies indicated they may collaborate in the testing, including the U.S. Department of Energy, which operates incinerators at several of its sites and funds a group identifying cross-cutting technologies. Also indicating support for testing mercury CEMs was a representative of EPRI, a nonprofit organization providing science and technology-based solutions in energy and power generation fields.

Vendors interested in participating in the mercury CEMs verification test should contact Tom Kelly at Battelle (Phone 614-424-3495, Fax 614-424-3638, E-mail [kellyt@battelle.org](mailto:kellyt@battelle.org)). For additional information about mercury CEMs, refer to the February 2000 issue of *The Monitor* (Vol. 3, No. 2), which is accessible on the ETV website at [http://www.epa.gov/etv/07/07\\_main.htm](http://www.epa.gov/etv/07/07_main.htm).

### What They Thought about the Mercury CEMs Meeting

Participants in the mercury CEMs meeting in April represented a variety of interests—from technology vendors to state regulators and permittees—but their reactions to the one-day meeting were quite similar and positive. Here are excerpts.

- ◆ *The meeting was very positive. It was useful and eye-opening and valuable in representing different perspectives. From the state regulator's position, it is just what we need. It also ties in to two regional plans for environmental priorities—acid rain and mercury emissions. We've been waiting for this like cats waiting for mice!*

John Shea  
New England Governors' Conference, Boston, MA

- ◆ *This was a good presentation and a unique opportunity to see EPA representatives and vendors working together. It is important for us to be able to identify instruments that can monitor for mercury but my primary interest is the technical breakthrough feature of it...that captured my imagination. I would appreciate seeing the draft test protocol and following the process.*

Kevin McDonald  
Maine Department of Environmental Protection

- ◆ *The meeting was very well conducted and made the vendors feel comfortable in participating. I got a lot out of the meeting and want to follow along with your progress and receive the test protocol. Mercury is a big issue in Florida.*

Martin Costello  
Florida Department of Environmental Protection

- ◆ *The way the meeting laid out the issues and proposals was quite good.*

John Bosch  
U.S. EPA

## Second Round of NO/NO<sub>2</sub> Testing

Three companies with portable NO/NO<sub>2</sub> monitors participated during May in a second round of verification testing at Battelle's facilities in Columbus, OH. They are Bacharach, Pittsburgh, PA; Land Combustion, Bristol, PA; and COSA Instruments Corp., Norwood, NJ. In January 1999, five companies submitted NO/NO<sub>2</sub> instruments for testing. They received verification statements and reports in September 1999.

### Note to Vendors:

For additional information about upcoming verification tests, please contact the following Battelle staff:

**Mercury CEMs, NO/NO<sub>2</sub> analyzers, and for general information about all AMS pilot verification tests** – Tom Kelly, 614-424-3495 or [kellyt@battelle.org](mailto:kellyt@battelle.org).

**Fine particle monitors, onboard vehicle emission monitors** – Ken Cowen, 614-424-5547 or [cowenk@battelle.org](mailto:cowenk@battelle.org).

**Optical open-path monitors** – Jeff Myers, 614-424-7705 or [myersjd@battelle.org](mailto:myersjd@battelle.org).

**Portable water analyzers, multi-parameter water probes** – Adam Abbgly, 614-424-5484 or [abbgja@battelle.org](mailto:abbgja@battelle.org).

## Upcoming Events

**June 18-22, 2000**  
**A&WMA 93<sup>rd</sup> Annual Conference & Exhibition, Salt Lake City, UT.** Don't miss the ETV panel discussion at the opening technical session, 10 a.m., Monday, June 19.

**October 2000**  
Combined AMS pilot air and water stakeholder committee meetings. Dates and location to be announced.



Visit the AMS pilot on the Web at [http://www.epa.gov/etv/07/07\\_main.htm](http://www.epa.gov/etv/07/07_main.htm).